L6 ANSWER 1 OF 1 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-034694 [03] WPIDS
DOC. NO. CPI: C2004-011410
TITLE: A formulation containing quaternary aminoalkylsiloxane, surfactant, and dispersing agent useful as a textile whitener, for cotton, keratin fibers, especially wool, silk, synthetic fibers and white toner pretreated textiles.
DERWENT CLASS: A25 A26 A87 F06
INVENTOR(S): GUTH, W; IDEL, R; KIERSPE, D; KOCH, F; KROTT, J; LANDENBERGER, P; LANGE, H; MEIER, H; MOLLER, A; WAGNER, R; MOELLER, A
PATENT ASSIGNEE(S): (FARB) BAYER AG; (GENE) GE BAYER SILICONES GMBH & CO KG; (FARB) BAYER CHEM AG
COUNTRY COUNT: 104
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2003095735	A2	20031120	(200403)*	GE	66	D06M015-643<--
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW						
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW						
DE 10221521	A1	20031204	(200404)			D06M013-50
AU 2003232759	A1	20031111	(200442)			D06M015-643
EP 1506336	A2	20050216	(200513)	GE		D06M015-643
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR						
KR 2004111607	A	20041231	(200528)			D06M015-643

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003095735	A2	WO 2003-EP4965	20030513
DE 10221521	A1	DE 2002-10221521	20020514
AU 2003232759	A1	AU 2003-232759	20030513
EP 1506336	A2	EP 2003-749889	20030513
		WO 2003-EP4965	20030513
KR 2004111607	A	KR 2004-718308	20041112

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003232759	A1 Based on	WO 2003095735
EP 1506336	A2 Based on	WO 2003095735

PRIORITY APPLN. INFO: DE 2002-10221521 20020514
INT. PATENT CLASSIF.:
MAIN: D06M013-50; D06M015-643
SECONDARY: B01F017-00; C08G077-04; C08G077-388; C08J003-18; C08L083-04; D06M015-03; D06M015-647

BASIC ABSTRACT:

WO2003095735 A UPAB: 20040112

NOVELTY - A formulation containing at least one quaternary aminoalkylsiloxane and at least one compound from the series:(a) hydrophilic nonionogenic surfactant, (b) hydrophilic dispersing agents, and (c) salts of di- and trivalent metals with inorganic acids are new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a process for preparation of the formulations in which at least one quaternary aminoalkylsilane compound is mixed with at least one compound from the above series (a) to (c) and optionally with other adjuvants and additives at a temperature of 20-90 deg. C.

USE - The formulation is useful as a textile whitener (claimed), e.g. for cotton, keratin fibers, especially wool, silk, synthetic fibers, or mixtures of these (claimed), mixtures of cotton, polyester, polyamide, polyacrylonitrile, wool or silk (claimed), polyester, polyamide, polypropylene or their mixtures (claimed), and also with anionic white toner pretreated textiles in cotton or mixtures of cotton with polyester, polyamide, polyacrylonitrile, wool, silk, in a jet-type dye application device (sic) (claimed)

ADVANTAGE - The formulation is excellent as a textile softener in finishing textile structures, e.g. in continuous or drawing processes and has high shear resistance.

Dwg.0/0

TECHNOLOGY FOCUS:

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TECHNOLOGY FOCUS - POLYMERS - Preferred Components:compound (a) = ethylene/propylene (EO/PO) modified compounds, optionally unsaturated and/or branched from the group:fatty alcohols, fatty acids, alcohol, acids, alkaryl derivatives, fatty amines, glyceride and sorbitan esters, where the number of EO/PO units is 15-150, the ratio of PO to EO units is at most0.25, and the number of EO units is at leastthe number of C atoms in the non-EO-part, and = alkylpolyglycoside, ethylene oxide/propylene oxide copolymer, or polyethersiloxane. The hydrophilic dispersion medium (b) is an aqueous polysaccharide from the substituted cellulose group. Salt (c) is a salt of Ca, Mg,or Al with HCl, H2SO4, or phosphoric acid, where the salt can be a hydrate. Compound (a) is a compound of formulas (1) to (9):

E = R1, H, straight chain or branched saturated, or singly or multiply unsaturated 1-18C alkyl, optionally singly or multiply substituted by OH, 1-4C alkoxy, 1-4C alkoxycarbonyl or carbonyl, or 5-10C cycloalkyl, which optionally is singly or multiply substituted by 1-4C alkyl, OH, 1-4C alkoxy, 1-4C alkoxycarbonyl or carbonyl;

R1 = straight chain or branched optionally unsaturated 8-40C alkyl, the alkyl chain is interrupted by one or more O and/or N atoms, and which is optionally substituted by one or more OH, 1-4C alkoxy, 1-4C alkoxycarbonyl, or carbonyl, amino, mono- or di 1-4C alkylamino, or = 5010C cycloalkyl, the alkyl chain of which is optionally substituted by one- or more O, one or more 1-4C alkyl, OH, 1-4C alkoxy, 1-4C alkoxycarbonyl, amino, mono- or di 1-4C alkoxycarbonyl or carbonyl, amino, or di 1-4C alkylamino;

R2 = straight chain or branched, saturated or singly or multiply unsaturated 1-40C alkyl, optionally singly or multiply substituted by OH, 1-4C alkoxy, 1-4C alkoxycarbonyl or carbonyl,

R3 = straight chain or branched 1-26C alkyl or 6-10C aryl,

R4 = R3 or a residue of one of the formulas (9a):

Z = (9b):

q = 15-150,

q1 and q2 = 0-150, q+q2 = q,

q3,q4, q5, and q6 = q,

r = 0-50,

r1 and r2 = 0-50, r1 +r2 = r,
R3-r6 = 0-50, r3+r4+r5+r6 = r, the ratio r:q at most0.25,
m = 1-50,
m7 and m8 - 1-50, 2at mostm7+m8, m7+m8 = m+1, the ratio q:m at least 4, s = 5-150, t = 5-150, 0.05at most s:t at most20; 0at mostz1at most2000, 0 at mostz2 at most2000, at least one r4 is not equal to R3, and 0.01at mostthe sum of the R3 alkyl: q+r at most1.
Compound (a) is a compound of one of formulas (1) to (9),
E, R1, and R2 = as defined above,
R3 = straight chain or branched 1-18C alkyl or 6-10C aryl,
R4 = R3, a residue of formula (9c): or (9d):
q1 and q2 = 20-100, q1+q2 = q,
q3 to q6 - 20-100, q3+q4+q5+q6 = q,
r = 0-20,
r1 and r2 = 0-20,r1+r2 = r, the ratio r:q at most0.25,
m = 1-7., M7 and m8 = 1-7,
2at mostm7+m8, m7+m8 = m, the ratio q:m at least4,
s = 5-100,
t = 5-100, at least one R4 is not equal to R3, and 0.01at mostsum of R3 alkyls:the sum of (q+r)at most0.5.
Compound (a) is a compound of one of formulas (1') to (9'): where the compound of formula (9') = a polyethersiloxane, and the expression (X) in brackets in formulas (I')-(8') = ethylene oxide or propylene oxide units or can be blocks or statistically arranged units, E, R1, and R2 = as defined above, R3 = straight chain or branched 1-26C alkyl or 6-10C aryl, R4 = R3 or a compound of formula (9d): Z = (9e): q, q1 to q6. r, r1 to r6, m, s, t, et = as defined above. Compound (a) is a compound of formulas (1') to (9'), E, R1, R2 = as defined above, R3 = straight chain or branched 1-18C alkyl or 6-10C aryl, R4 = R3 or a compound of formulas (9f): or (9g): q, q1 to q6, r1 to r6, m, s, t, etc. = as defined above. Compound (a) is a compound of formulas (1) to (9): E = (9h): ,R1 = (9k): n1 = 9-23, n2 = 3-23, n3 = 0-18, n4 = 7-23, n5 = 3-15, R2 = (9m): N6 = 8-23, R3 = 1-18C alkyl or 6-10C aryl, R4 = (9n): or (9p): q = 25-60, q1 and q2 = 25-60, q1+q2 = q, q3-q6 = 25-60, q3+q4+q5+q6 = q, r = 0-10, r1 and r2 = 0-10, r1+r2 = r, r3-r6 - 0-10. Compound (a) is a compounds of formulas (1') to (9'): E = (9q), R1 = (9r):, n1-n5 = as immediately above, R2 = (9s): R3 = 1-18C alkyl or 6-10C aryl, R4 = R3 or (9t): q = 25-60, q1-q6, r, r1-r6 = as defined immediately above. Compound (b) = carboxymethyl cellulose, methylhydroxypropyl cellulose or a compound of formula (9u): x = 1.5-20, preferably 1,5-10. The quaternary alkyl siloxanes = linear or cyclic polyysiloxane polymer with repeating units of formulas (10): and (11): X = divalent 4C hydrocarbon which can include an OH group, can be interrupted by an O atom, and the X groups in the repeating units can be the same or different, Y = divalent 2C hydrocarbon, which can include an OH group, and can be interrupted by an O or N atom, R11-R14 = 1-4C alkyl, benzyl, or R1-R4 = bridged (sic) alkylene, R16 = 1-20 C alkyl, which can be O-substituted, M = a structure (12): Eox = ethylene oxide unit, Pox = propylene oxide unit, B= straight chain or branched 2-6C alkylene, v = 0-200; w = 0-200,v+w at least 1, n = 2-1000, n in the repeating unit can be the same or different, A- = inorganic or organic ion (sic). Compound (a) = a stearic acid ester and contains 40 EO units. The formulation contains a compound (f), a surfactant, e.g. a tridecyl alcohol with 12 EO units or an ether of tridecyl alcohol with 6 EO units, or an emulsifier.

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB
MANUAL CODES: CPI: A12-S05S; F03-C05

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